SUMMARY OF THE QUALITY SYSTEMS COMMITTEE MEETING DECEMBER 14-15, 1999

The Quality Systems Committee of the National Environmental Laboratory Accreditation Conference (NELAC) met on Tuesday, December 14, 1999, at 1 p.m. Eastern Standard Time (EST) and on Wednesday, December 15, 1999 at 8 a.m. EST as part of the Fifth NELAC Interim Meeting in Washington, DC. The meeting was led by its chair, Mr. Joe Slayton of the U.S. Environmental Protection Agency (USEPA) Region 3. A list of action items is given in Attachment A. A list of participants is given in Attachment B. *The purpose of the meeting was to discuss proposed changes to NELAC Standards D.4 Radiochemical Testing, D.5 Air Testing, D.3 Microbiology Testing, D.2 Toxicity Testing, 5.12 Records, and small changes within sections.*

COMMITTEE INTRODUCTIONS

Mr. Slayton welcomed the group and remarked that there was a smaller attendance today in comparison to previous meetings. The chair, followed by the other committee members, introduced themselves and described their affiliation and background.

GUIDING PRINCIPLES

Principles the committee has been using in responding to comments and resolving conflicts were reviewed by Mr. Slayton.

AREAS OF FOCUS

Since July 1999 the committee has reviewed appendices D2, D3, D4, and D5 of Chapter 5 of the NELAC Standards. The committee has also reviewed Section 5.12 on records requirements in order to clarify and simplify the section. In response to a comment received from the Accrediting Authorities Committee the committee has reviewed the standards for "shoulds."

Because some of the discussion areas on the agenda are speciality areas (e.g., radiochemistry) and the discussion on these areas may be limited, the group agreed to open discussion to issues that were not on the agenda, if there was time.

APPROACH FOR RESPONDING TO COMMENTS AND SESSION GROUND RULES

It was noted that there is a template for submitting comments in the handout materials provided to all registrants. The committee has found the templates to be useful because the electronic format allows committee members to share information easily. Also, it requests proposed wording changes, which helps the committee to avoid misinterpretation of the comment(s).

The committee has three remaining sets of comments to review of all the comments submitted since July 1999. The update on the comments will be posted with the minutes from the December 7, 1999 meeting. The chair stated that the committee welcomes comments and appreciates the discussions that the comments elicit in committee meetings.

The NELAC Ground Rules were read aloud and were posted on the wall of the meeting room.

PROPOSED CHANGES TO STANDARDS

Chapter 5, Appendix D

D.5 - Air Testing

The proposed changes to D.5, Air testing represents the work of a subcommittee that met with the Department of Defense (DOD) and other parties interested in consensus. Both private and public sectors were represented by the subcommittee members.

Appendix 5 has been substantially reduced in size and is now limited to what happens to samples once they arrive in the laboratory. It addresses essential quality control (QC) only, much of which is also included in Section D.1. The "grey areas" between laboratory and field were removed and sent to the Field Measurements *Ad Hoc* Committee for discussion. The committee recognized that there was some redundancy in Section D.1 and other parts of the standard, but the committee considered it appropriate to maintain the redundancy.

Recommendation: Add a paragraph describing the scope of the standard including the scope of testing covered, which programs are covered (e.g., air sampling programs, compliance testing under Resource Conservation and Recovery Act [RCRA]) and which are not (industrial testing under OSHA).
Resolution: Appropriate to add a paragraph describing the scope of D.5. However, it is understood that NELAC addresses EPA programs such as RCRA.

Question: Is this section intended to be a stand alone section on air testing or look back on D.1 also? If so, it should be specifically stated.
Resolution: All appendices rely on the body of Chapter 5.

Question: What if methods don't have essential QC required?
Response: The standards were written to be broad and address essential QC. Therefore, when methods do not include specific QC measures, the NELAC standards require essential QC.

Editorial: Correct outline numbering. Change "must" to "shall."

<u>Section D.5.1.a.1 Method Blanks</u>

Clarification: Specify either preparation batch or analytical batch as opposed to simply "batch."
Resolution: Preparation batch is intended.

Question: What does a laboratory do if a method blank result contributes to less than 10% of the total amount of analyte found in the sample?
Response: The committee is only interested when it exceeds 10%.

Issue: For some techniques, it is not physically possible to meet a requirement as written in the standards (i.e., "shall" is used although it may be impractical is certain cases).

The committee recognizes that this is an issue, but wants to avoid using terms such as "if applicable" throughout the standard. The committee is open to suggestions on how to address this issue.

Section D.5.1.b.1 Laboratory Control Sample (LCS)

Question: Is the intent that the laboratory screen samples and then see what else needs to be run at what concentration and do multiple runs? It is expensive for laboratory to determine concentration and some programs are not allowed to reanalyze. What if the analytes are at different concentrations - does the committee expect 2 LCSs or one at the midpoint?
Resolution: The committee clarified that the standard is not asking for multiple LCS's in 1 batch.

Replace "should" with "shall" in both cases.

Concern that current language eliminates a laboratory's ability to run a LCS at a target concentration for a specific program. The commented proposed language: "concentration of LCS shall be relevant to the use of the data."

One participant commented that there is confusion over LCS and calibration verification which are from a different source and separate.

Section D.5.1.a.2 Break Through

A number of participants addressed this section. Comments included concern that break through and source are not evaluated for some test methods. For example, it would be difficult for laboratories to determine break through for furans and some metals and impossible to audit. Field people are better able to identify break through. Another participant stated that the committee needs to be careful of what they ask of a laboratory as a laboratory is responsible for analysis, but not necessarily calculating break through. Another individual commented that standard operating procedures (SOPs) for defining and detecting break through is required by the standard.

Resolution: The committee agreed that this issue falls in the gray area that needs to be discussed with the Field Activities Committee. The QS Committee anticipates that the Field Activities Committee will need to address the break through issue.

Section D.5.5 Data Reduction

Question: Is the intent to have flexibility to do any data reduction or should it be stated in the SOP? The participant was seeking additional explanation of the intent of this section beyond the current sentence.
Resolution: The committee chair recognized that this sentence looks like it might be a place holder and it is consistent with the other appendices.

Comment: Desorption efficiency is another quality control that will not be easy to implement for particulate matter, and perhaps other materials.
Committee comment: Possible to list those for which it would be practical
Commentors suggestion: Desorption efficiency, matrix, and surrogate should be addressed together as their purpose is the same.

Question: How often should reused media be changed?
Resolution: Often recovery is already defined in the method

Section D.5.4.d

Question: What if a laboratory can show that a method can provide data for the range of interest - why is it necessary to determine the level of detection?
Resolution: This section has a definition of detection limit that is inconsistent with definition in glossary. The committee will address this inconsistency.

Section D5.3.5 - Demonstration of Capability

Comment: "Prior to use" has extensive implications.
Resolution: Yes, that is what is intended. This comment brought up the issue of the definition of matrix (air) in the glossary and whether or not "air" should air be broken up in the definition (air particulates, etc.). After some discussion the committee concluded that the specific matrix is determined by the method and the resolution was to not make the "air" matrix any more specific. The committee did recognize that particulates are not covered in the glossary definition of air.

In a related discussion on a potential redundancy with LCS and matrix one participant stated that the method for semivolatiles and PCBs are not matrix dependant.
Resolution: maintain "matrix."

Question: Is the reference to 5.6.2 intended?
Resolution: Yes, that is a training requirement.

Section D5.4.a

Consolidate the one sentence in this subsection into the D.5.4 paragraph.

Section D5.4.d

Change the existing text from "it is essential that all sample processing steps..." to "All sampling processing steps shall be included in the determination of ...."

LCS and desorption may be same for analytes and spiking, but not for recovery. For LCS: 85 or 90% recovery; the laboratory does not adjust to 100%. However, desorption efficiency has a different purpose; if you get 90 or 95% laboratories convert it to 100%.

If the method requires it, then you will need to run it so the method would specify if you want to adjust for poor efficiency. LCS won't indicate what went wrong, but you will know you have a problem.
Resolution: For essential standards, we can leave it as is (i.e., keeping LCS and desorption efficiency in the standard). Doesn't stress importance of new batches of material, which may be something we lose if we just take the LCS.

Comment: The method is supposed to dominate - we are just supposed to be talking about essential qc. If all methods are specified, just list components that laboratories need to go through, but it is the methods that determine it.

D.4 - Radiochemical Testing

Mr. Slayton introduced Donovan Porterfield an expert on radiochemical testing who participated via telephone. Mr. Porterfield is a former committee member who was active in preparing Section D.4. He did not participate in the session as a committee member, but as a technical expert.

The chair reported that the Accrediting Authorities Committee had asked the QS Committee to find all uses of "should" in Chapter 5. Many of the occurrences of "should" were in this appendix, which have been changed to "shall."

Section D4.2c Positive Controls

Several participants were not comfortable with *a priori* detection limit as they do not know of a scientific way to do an *a priori* detection limit.
Response by Mr. Porterfield: That protects laboratories from being outside values and gives them some confidence when they do their spike ranges in advance, but other than that there is no distinction for having an *a priori* detection limit.

Section D4.7. Detection Limits

This section still remains to be addressed in the future.
Comment: Indicate same flexibility we have in other appendices in setting detection limits.
Question: Would an mdl approach apply to radiochemisrty?
Response by Mr. Porterfield: Yes, but there are different approaches for mdls, there is a wide variety. With regard to spiking, for most isotopes for most matrices you can spike.
Resolution: Use D.1.4 for D.4.7. California has required mdls, even though NELAC hasn't.

Section D.4.2.c

Comment: For radiochemisrty, LCS and spike should be from separate sources - this is inconsistent with other appendices where only LCS is from a separate source.
Resolution: Committee doesn't want to change other appendices. Although matrix does not have to be from a separate source, it is easier for laboratories to use a second source.

Comment: With regard to, "shall be greater than 10 times and less than 100 times less than the detection limit." For LCS want a level that is comparable for their samples, so we shouldn't restrict then to greater than 10 times, if they can achieve acceptance criteria they shouldn't be restricted.
Comment: The rationale for greater than 10 times is to have a lower level of uncertainty. A percentage is not specified in other appendices, but in radiochem you report uncertainty.
Resolution: Shall be greater than the established detection limit, but less than 100 times the detection limit.

Section D4.2.e

Comment: Change wording completely to allow laboratories to use whatever applicable standards to do LCS. What is described as a single isotope is not easily attainable.

Comment: The standard does not say you cannot use more than one analyte. However, each shall be assessed. The reason for this is to not allow laboratories to pick the best result.
Resolution: Request for suggested rewording for clarification and to avoid misinterpretation.

Section D.4.3

Comment: Additions to replicates to allow LCS or reference spike. The client should have a say in which. LCS indicates precision of analytical protocol. For hazardous wastes recommended the addition of duplicate matrix spike because of heterogeneity in hazardous waste
Resolution: add replicate LCS, add duplicate matrix.

Section D4.4.b on carriers

Comment: Delete internal standard because that should be in tracer category.
Resolution: Delete "i.e. internal standard."

Section D4.5 Demonstration of capability

Comment: Include clean matrix, method detection determination. MDL is necessary as is spiking real world samples for matrix effect.
Resolution: copy d1.4 into d4.7.

Comment: Demonstration of capability and detection - it is in 2 sections and they will have to look at both. Recommend to requiring spiking the matrix.
Resolution: a number of individuals like the wording as it is, the wording will stay as is.

Section D.4.5.b

Comment: With regard to PT testing it looks like the laboratories are supposed to use PTs for QC procedures. These PT samples are too infrequent to be a QC sample.
Resolution: Consider deleting it.

ANSI reference?

Comment: Delete reference to ANSI because it is over and above what is already required of providers.
Resolution: This reference should be in chapter 2.

Section D.4.6.b

Comment: Delete regression as it doesn't apply.
Resolution: Leave as is, because both linear and non-linear are included and it doesn't hurt to have both.

Calibration Verification

Comment: LCS is not calibration verification, can we drop it?
Resolution: No a check source is something simple

Calibration curves

Comment: Too much detail may be a remnant that has been taken out elsewhere. The reference to ANSI should go back to chapter 2, but first part should stay there.
Resolution: Will be considered by QS.

Comment: Can't have spike 100 times over DL.
Resolution: Will be considered by QS.

Section D4.10.b Instrument performance

When a laboratory is being audited - they ask what is frequency of instrument performance checks? NELAC says "regular basis" - what does that mean?
Resolution: Will be addressed by QS.

Section D.4.2 on positive controls---- matrix spike replicate

Comment: add replicate requirements to first sentence.
Resolution: Will be considered by QS.

Section D4.2

Comment: Under a, "the results of this analysis shall be one of the QC measures...".
Resolution: That will be dropped. Also, committee will look at written comments with regard to 10 for hazardous waste and 20 for waste water.

Comment: One participant suggested using the term "measurement system," to include the analysis of detection limits because detection limits are a function of the analyst as well.
Resolution: analyst was not included intentionally.

Section D.4.10.d 1-3

One participant suggested a less stringent schedule as many states have 6 month intervals. Superficially, change subsection 2 to 6 months and allow states to make it more stringent if they choose and change subsection 3 from daily to monthly. Another participant considered these suggested changes too lax.

D.3 - Microbiology Testing

The changes to this section reflect input from small laboratories as well as drinking water issues. In addition, the committee aimed to simplify this appendix and make it more readable.

Comment: Microbiology Testing will need to be significantly revised because of upcoming unregulated contaminants rule. The time frame is within 2-3 years.
Resolution: NELAC is committed to continuous improvement.

Comment: With new methods that are coming out, there is a gap with the "Standard Methods", because the new methods do not reference 9020 for any additional methods and do not reference standard methods as written in federal register. In order to make the necessary link, something needs to be add into the NELAC standard as states want to be able to enforce the standard without requiring "leaps of faith."
Resolution: Proposed wording for D3 has been submitted, which will be a new subsection "c."

Section D.3.a Microbiology Testing

Question why "as well as sterility testing" was deleted.
Resolution: QS will attempt to clarify standard.

Section D.3.1.a Negative Controls

Comment: Delete "cultured samples."

Section 5.3.1.a3 Negative Controls

The deletion of a negative culture control elicited numerous comments. One participant stated that there is a conflict between the proposed change to the standard and drinking water requirements as drinking water requirements had been changed (negative culture control had been deleted). The committee responded that this deletion was made in the interest of small laboratories that do not maintain a culture collection and because a negative control culture is not seen as essential qc. The fact that it is required for drinking water standards is not a problem. As long as it is required by the method or program, NELAC's tiered approach addresses this issue. However, in the case where an organism defines the method, a negative control is needed as indicated in drinking water certification. Another comment concerned the frequency of negative control and whether the frequency should be per batch or per series.
Resolution: One participant has already submitted proposed wording to address this issue to include negative controls.

Section D3.8.c.2 Temperature and Measurement Devices

Comment: The last sentence specifies continuous temperature recording or spore strips at least once a month. Questions on this section included the frequency of testing. Are both types of testing required, or just strips?
Issues: The drinking water program requires strips. Some laboratories do not have continuous temperature recorders. Cost of testing is high. One option is to require either a continuous recording device or maximum read thermometer as in the drinking water certification manual such that there is a reading for every cycle.

Comment: A UV sterilizer can't be used for sterilizing funnels, funnels need to be autoclaved. Therefore, revise UV sterilizer to UV sanitation or add a sentence that exposure to UV can not be considered sterilization.
Resolution: Committee will change the wording.

Section D.3.6.c (checklist in bound volume)

Comment: It is not clear what standards are intended and it can not be audited. So recommend adding them in or referencing them.
Resolution: The committee will consider adding in the standards for clarity, even though there had been discussion about leaving the decision up to the laboratory. As a starting point, the committee will consider the drinking water certification manual table and see how the voting body responds. The option of pointing to laboratory SOPs, which could be audited, was considered a less favorable resolution.

Purchased Water

Comment: There is a problem with laboratories purchasing water. Laboratories are not testing the water when it arrives because they assume that it meets the producers specifications. Guidance is needed on frequency of testing purchased water that is not cost prohibitive (e.g., requiring a certificate from the producers).
Resolution: The committee asked if there are market driven solutions? Will producer meet needs of laboratories? Participants replied that some producers will meet laboratories requirements, but some laboratories will still need to do monthly testing. To accommodate small laboratories, the standards would restrict the volume they have on hand, but will still require monthly testing. One participant has submitted proposed language to the committee.

Section D3.2.a Duplicates

Specify duplicates and report both results - if possible the laboratory must report duplicates

Section D3.11

Comment: The terms accepted and official are used. Participant recommends using "approved" to be consistent with the rest of the standard.

Section D.3.8e

References Section 5.9.4.2.1, which should be Section 5.9.4.1.e.

The discussion involved many comments from regulators. The discussion brought out the need to clarify whether the drinking water certification manual is considered part of the drinking water requirements. For example, Cincinnati considers the manual guidance whereas other states consider it more stringent. One participant cautioned that the certification manual uses "shoulds" throughout, which indicates guidance. The committee needs to make sure that there are not holes in this microbiology section and that it will not negatively impact reciprocity.

D.2 - Toxicity Testing

The chair described that there are many proposed changes to this section based on comments from Virginia, California, and New Jersey. The intent was to expand beyond whole effluent to toxicity testing in general.

Section D.2.8i (formerly f)

Comment: Keep Section (i) as an option, but include the former Section (f) as a secondary option.
The original requirements are adequate and change will require additional testing or buying more food.
Resolution: This change was made because it is required that each lot be evaluated and what is under f has a problem with detection limits. The committee requested ideas on capturing the nutritional quality of food that would be cost effective as another way to deal with this issue.

Section D2.4.d Sensitivity

Comment: Would like language on reporting confidence intervals to appear elsewhere
Resolution: The language was removed in c due to redundancy. MSD is in the glossary.

Section D2.6.c toxicity testing
Comment: Standards are restrictive by requiring deionized water for preparing synthetic water. Suggest adding other types of water or remove the end of the sentence.
Resolution: That is not the intent of the standards. The participant will propose language to differentiate the types of water (i.e., completely formulated water or water with one parameter adjusted).

Section D2.8h

Question: Why 1/10 and clarify use of most sensitive species?
Resolution: Rationale provided to participant, who agreed..

Section D.2.8n

Question: Define period and basis for 90%.

Resolution: Period is in method and depends on organism used, but does need some definition. The participant suggested 48 or 72 hours, but will think about it when methods have short time period. Rationale for 90% was provided.

Section 5.2.8u

Comment: Re-evaluate 1 hour requirement as 1 hour is not enough to cool to 6 degrees. Volumes of samples can be 5 gallons. The point is to indicate that cooling process has been initiated. Another participant remarked that the responsibility for temperature is the collectors, not the toxicology laboratories.
Resolution: Clarification was provided from former committee member that 1 hour is intended to define "immediately after collection" and is not intended to mean that within an hour the sample needs to be at a specific temperature. The committee will consult original language -in 5.11.3.1 to clarify this issue.

Open floor for discussion

Question: Is D.1.4.f to be deleted?
Resolution: The committee decided that the definition for quantitation limit would not be changed, but that D.1.4.f would be considered for deletion.

Section D.1.1.b positive controls

Comment: Question using matrix spike instead of laboratory control sample because a matrix spike can pass when a method is out of control. Also, matrix spike language does not specify that a matrix spike does not need to be from an independent source. Suggest deleting note on this issue.

Resolution: QS will consider dropping the note in D.1.1.b.

Frequency of laboratory control samples

Comment: Recommend that where surrogates are required by a method that a laboratory sample can be run in one in 20 instead of every batch. This is a small laboratory issue because of cost. While some participants consider a surrogate an acceptable double for an LCS, others did not agree and consider it important to have an LCS in each batch.

Comment: Is it a requirement that the LCS source is separate source ?
Resolution: Yes, as documented in the glossary, but this is not included in D.1.1. The difference between the glossary LCS definition and the standard will be resolved.

5.6.2.c.4 Laboratory management responsibilities for personnel

Comment on continued proficiencies.
Resolution: Need to point to Appendix C to clarify.

Question:#4 at least 4 consecutive samples - what is consecutive?

Clarification: The intent is that 4 consecutive batches means over 4 days. The point was to use something the analyst is doing anyway.

Chapter 5 - Quality Systems

Section 5.12 Records

The chair stated that the proposed changes to Section 5.12 are intended to organize the material in a more logical fashion and clarify the distinction between 2 types of records.

Chain of Custody was a primary topic of discussion. Comments are summarized below.
Comment: Even with sample tracking, a signature or initial is still needed with each activity.
Resolution: It is a general requirement under analytical issues, see 5.12.3.3.f (in bound volume).

With regard to not including a list of records, there was concern that laboratories won't realize the extent of records intended and uncertainty is created. In addition, the requirements in 5.13 can not be supported as entire chain is supposed to be documented for client.
The committee replied that the list of records was removed because these are standards, not guidance. The committee suggested pointing to a list as guidance, which would be consistent with "e."

One participant requested a better definition of sample preparation that indicates that it is not sample handling.

Section 5.12.11

Sample receipt and time should match air bill. Some laboratories are confused about this.

Section 5.12.4

Simply using the term "Chain of custody" can be confusing because it can mean 2 things: 1) field to laboratories with sign off materials or 2) internal chain of custody a formal process that is invoked by contract for certain regulatory programs. Other terms that were used by other participants included sample transmittal and sample tracking or legal chain of custody, internal chain of custody, person to person, and criminal chain of custody. One participant did not like "legal chain of custody" because it implies the other is not legal while another participant does not want small laboratories bound to internal QC by the standards. Another participant encountered difficulty at the state level when trying to use the term internal chain of custody in regulations.
Resolution: The committee recognized the need to clarify the chain of custody terminology because it is interpreted and used in different ways.

Some clarification was provided to participants on regarding the "if required" clause. One participant suggested that "if required" be placed more prominently or earlier in the text for clarity. One participant also discussed a potential problem with how operators and their tests are handled. Although chain of custody is not required by the state, there is an issue with waste water operators doing the tests themselves. In this case, it should be clearly indicated that those results

are not laboratory results or the operators should conform to the standards. This issue could be field measurements issue.

Proposed Small Changes

The chair explained that these small changes were made to make the standards more auditable (e.g., remove shoulds)

Section 5.4.2.b

Question: In reference to "pressures that may adversely affect the quality of work," does this refer to personal issue such as a divorce which can affect an operators performance?
Resolution: This is ISO language. The committee is considering a comment to tie this to ethical training requirements, which would help a laboratory train staff to determine when their personal problems are interfering with the quality of work.

Section 5.5.3.5 corrective actions

If a corrective action is in process, but the corrective action has not been completed, should that be indicated as a deficiency in the audit report? No, not under a corrective action, but it could be a deficiency under another section (e.g., under training if a replacement analyst is not properly trained for the work he or she is conducting)

Section 5.5.3.1

Comment: Change "was involved" to "was affected".
Resolution: The committee agreed.

Section 5.5.3.3 audit review

Comment: Is this referring to internal and/or on-site audit?
Committee: Both. Language needs to be clarified.

Section 5.5.4

No comments.

Section 5.6

No comments.

Section 5.8d

There were a number of comments on what is appropriate labeling (e.g., use a sticker for operational status, but not calibration).
One participant distinguishes between standardization and calibration, which was the subject of past committee discussion.

Section 5.9.2

Clarification: Section 5.9.2 refers to standards and 5.9.3 is for weights; which are applied where?
Resolution: Reinsert one of the "where applicable" deletions in order to make it consistent with c.

Clarification: Should QC materials be traceable to their "referenceable" source?
Resolution: Where possible.

Comment: a requirement to trace all standards to the manufacturer would be deficient without traceability.
Resolution: That is not in NELAC now. See documentation of standards and reagents in Section 5.10.5.

Separate thermometers and balances (3.9.2) from traceability of standards (3.9.3) because laboratories already understand what to do with the former.

Section 5.9.3.a

Clarify reference standards by including SRMs, for example, in the parentheses.

Section 5.9.4.1 Support Equipment

No comments on proposed changes.

Section 5.9.4.2.1

Comment: "Referenced materials" has a different meaning (see glossary) than the one intended here.
Proposed language: "Included in the test method the records of those materials ....

Glossary

Recommendation: Identify a way to denote terms that are listed in glossary.

Section 5.9.4.2.1.d

Comment: every time a laboratory runs an analysis, they shouldn't have to verify calibration. For example, when a laboratory buys prepared standards, the point of the second source is to check that the solutions have been made up properly. As long as the source is verified and the lot number is the same, the analyst should not have to keep checking calibration.
Resolution: The committee indicated that the standards say "initial calibration."

Section 5.9.4.2.2

No pressing comments.

NON-AGENDA ITEMS

After the discussion of Section D.5, the floor was opened for comments for issues that did not appear on the agenda.

One participant discussed the issue of precedence. The attendee suggests that laboratories follow the requirements of the published method first, and if something is required by NELAC (essential QC) that is not required by method, then that NELAC requirement is done in addition. The attendee is concerned that deciding what is more or less stringent is a bad position for a laboratory because USEPA programs have specific requirements. In addition, it is not always clear which is more stringent.

The chair responded that this is addressed by NELAC's tiered approach and the outcome is the same.

ADJOURNMENT

The meeting was adjourned by the chair.

Attachment A

ACTION ITEMS
QUALITY SYSTEMS COMMITTEE MEETING
DECEMBER 14-15, 1999

Item No.	Action	Date to be Completed
1.	The QS committee was to review all comments received during NELAC Vi and reach consensus on proposed changes to the standards for the next voting meeting (NELAC VI).	

Attachment B

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QUALITY SYSTEMS COMMITTEE MEETING
DECEMBER 14-15, 1999

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